

In the Claims:

Please cancel claims 4, 7-8, 10-11, 13-14, 17-18, 21-22, and 24. Please amend claims 1-3, 5-6, 9, 12-, 15-16, 19-20, and 23. Please add new claims 25-36. The claims are as follows:

1. (Currently amended) A data processing system for managing transactions, comprising:

at least one resource manager (RM) for managing changes to respective system resources in accordance to a commit/backout protocol;~~and;~~

a resource manager coordinator (RMC) for coordinating commit-backout activities of the at least one resource manager[[,]]; and

~~characterised by comprising~~

at least one process resource manager (ERM), working in accordance to a commit/backout protocol, for managing ~~the~~ an execution and ~~the~~ compensation of non-compliant processes not complying to the commit/backout protocol ~~due the access to non-compliant resources or invoked by a non-compliant protocol,~~

compensation services of the at least one process resource manager (ERM) being coordinated by the resource manager coordinator according to the commit/backout protocol, the at least one process resource manager (ERM) ~~automatically~~ determining, upon receipt of a backout request resulting from the execution of the non-compliant processes, ~~a sequence of~~ compensation actions to be performed ~~so as to backout actions performed during the execution of the non-compliant processes,~~ and managing the execution of said compensation actions to transform the system resources into a mutually consistent state that differs from an initially

consistent state of the system resources that existed prior to the execution of the non-compliant processes.

2. (Currently amended) The data processing system ~~according to~~ of claim 1, ~~in which said~~
~~sequence of compensation actions consists in a sequence of inverse actions, each inverse action~~
~~being the inverse of a respective action performed during the execution of the non-compliant~~
~~processes wherein changes to the system resources resulting from the execution of the non-~~
~~compliant processes transform the system resources into a mutually inconsistent state.~~

3. (Currently amended) The data processing system ~~according to~~ of claim ~~[[1]]~~ 2, ~~in which upon~~
~~receipt of a backout request, the compensation actions are performed in parallel to the backout~~
~~activity of the resource managers, coordinated by the resource manager coordinator wherein the~~
~~changes to the system resources resulting from the execution of the non-compliant processes~~
~~cannot be backed out to transform the system resources from the mutually inconsistent state to~~
~~the initially consistent state.~~

4. (Canceled)

5. (Currently amended) The data processing system ~~according to~~ of claim 1, ~~in which~~ wherein the
process resource manager manages the execution of the non-compliant processes and execution
of the compensation actions by means of at least one task, and wherein the at least one task is
associated with ~~either one unit of work or a plurality of correlated units of work~~ [[s]].

6. (Currently amended) The data processing system ~~according to~~ of claim 1, further comprising an information recording service (~~LOG~~) for recording information concerning the compensation actions performed during the execution of ~~at least~~ the non-compliant processes, the process resource manager ~~automatically~~ determining the ~~sequence of~~ compensation actions on the basis of the information recorded by the information recording service.

7-8. (Canceled)

9. (Currently amended) The data processing system ~~according to~~ of claim ~~[[8]]~~ 6, ~~in which the~~ further comprising a classification service comprises that classifies processes to be executed into process types and includes a process catalog (CAT) providing a catalog of that comprises the process types and, for the process types in the catalog, the classification service further includes information for enabling the process resource manager ~~to automatically determining~~ determine the ~~sequence of~~ compensation actions on the basis of the ~~recorded~~ information recorded by the information recording service.

10-11. (Canceled)

12. (Currently amended) The data processing system ~~according to~~ of claim 6, further comprising an error recovery service (~~ERR~~) implementing an error recovery procedure for managing error conditions occurring during the execution of a process, wherein the error recovery procedure depends on the information recorded by the information recording service.

13-14. (Canceled)

15. (Currently amended) The data processing system ~~according to~~ of claim 1, ~~in which wherein~~ the non-compliant processes comprise[[s]] ~~at least one among a~~ non-compliant process[[es]] running on ~~at least one distinct data~~ a counterpart processing system (C-SYS1, C-SYS2) and processes running on the data processing system but not complying with the commit/backout protocol, and wherein a labile link exists between the data processing system and the counterpart system.

16. (Currently amended) The data processing system ~~according to~~ of claim 15, further comprising a system recovery service (YSR) implementing a system recovery procedure for establishing a synchronic point between the data processing system and the ~~at least one distinct data~~ counterpart processing system.

17-18. (Canceled)

19. (Currently amended) The data processing system ~~according to~~ of claim 16, ~~in which wherein~~ the system recovery procedure includes a negotiation phase between the data processing system and the ~~at least one distinct data~~ counterpart processing system, said negotiation phase comprising negotiating identification information of the processes directed to the ~~distinct data~~ counterpart processing system.

20. (Currently amended) The data processing system ~~according to~~ of claim 15, further comprising a connectivity service (CNCT) exploited by the process resource manager for managing communication between the data processing system and the ~~at least one distinct data counterpart~~ processing system.

21-22. (Canceled)

23. (Currently amended) ~~[[A]]~~ The data processing system of claim 1, ~~for managing transactions,~~
~~the system comprising:~~

~~a first transaction management system, comprising:~~

~~a plurality of resource managers, each one responsible of managing respective system
resources according to a commit/backout protocol;~~

~~characterized by comprising~~

~~at least one process resource manager (ERM), working in accordance to a commit/backout
protocol, for managing the execution and the compensation of non-compliant processes not
complying to the commit/backout protocol due the access to non compliant resources or invoked
by a non compliant protocol;~~

~~compensation services of the at least one process resource manager (ERM) being
coordinated by the resource manager coordinator according to the commit/backout protocol, the
at least one process resource manager (ERM) automatically determining, upon receipt of a
backout request, a sequence of compensation actions to be performed so as to backout actions
performed during the execution of the non-compliant processes, and managing the execution of~~

~~said compensation actions;~~

~~Said compensation services of the at least one process resource manager (ERM) being ,
coordinated by the resource manager coordinator in respect to transactions to be carried out by at
least one second transaction management system distinct from the first system, the process
resource manager managing backout activities of the transactions carried out by the at least one
second system wherein the at least one process resource manager (ERM) is also for managing an
execution and compensation of compliant processes complying to the commit/backout protocol,
wherein the initially consistent state of the system resources existed prior to the execution of the
compliant processes, wherein changes to the system resources resulting from the execution of the
compliant processes transform the system resources into a state of inconsistency, and wherein the
at least one process resource manager (ERM) determines, upon receipt of a backout request
resulting from the execution of the compliant processes, additional compensation actions to be
performed to transform the system resources from the state of inconsistency to the initially
consistent state.~~

24. (Canceled)

25. (New) A data processing method for managing transactions, comprising:

providing at least one resource manager (RM) for managing changes to respective system resources in accordance to a commit/backout protocol;

providing a resource manager coordinator (RMC) for coordinating commit-backout activities of the at least one resource manager;

providing at least one process resource manager (ERM), working in accordance to a commit/backout protocol, for managing an execution and compensation of non-compliant processes not complying to the commit/backout protocol, said resource manager coordinator (RMC) being adapted to coordinate compensation services of the at least one process resource manager (ERM) according to the commit/backout protocol;

determining by the at least one process resource manager (ERM), upon receipt of a backout request resulting from the execution of the non-compliant processes, compensation actions to transform the system resources into a mutually consistent state that differs from an initially consistent state of the system resources that existed prior to the execution of the non-compliant processes; and

performing the compensation actions.

26. (New) The method of claim 25, wherein changes to the system resources resulting from the execution of the non-compliant processes transform the system resources into a mutually inconsistent state.

27. (New) The method of claim 26, wherein the changes to the system resources resulting from

the execution of the non-compliant processes cannot be backed out to transform the system resources from the mutually inconsistent state to the initially consistent state.

28. (New) The method of claim 25, further comprising:

managing, by the process resource manager, the execution of the non-compliant processes; and

executing the compensation actions including executing at least one task, wherein the at least one task is associated with a plurality of correlated units of work.

29. (New) The method of claim 25, further comprising:

recording information, by an information recording service, concerning the compensation actions performed during the execution of the non-compliant processes; and

determining, by the process resource manager, the compensation actions on the basis of the information recorded by the information recording service.

30. (New) The method of claim 29, further comprising classifying, by a classification service, processes to be executed into process types, wherein the classification service includes a process catalog that includes the process types and, for the process types in the catalog, the classification service further includes information for enabling the process resource manager to automatically determine the compensation actions on the basis of the information recorded by the information recording service.

31. (New) The method of claim 29, further comprising implementing, by an error recovery service, an error recovery procedure for managing error conditions occurring during the execution of a process, wherein the error recovery procedure depends on the information recorded by the information recording service.

32. (New) The method of claim 25, wherein the non-compliant processes comprise a non-compliant process running on a counterpart processing system, and wherein a labile link exists between the data processing system and the counterpart system.

33. (New) The method of claim 32, further comprising providing a system recovery service (SYSR) implementing a system recovery procedure for establishing a synchronic point between the data processing system and the counterpart processing system.

34. (New) The method of claim 33, wherein the system recovery procedure includes a negotiation phase between the data processing system and the at least one distinct data counterpart processing system, said negotiation phase comprising negotiating identification information of the processes directed to the counterpart processing system.

35. (New) The method of claim 32, further comprising providing a connectivity service (CNCT) exploited by the process resource manager for managing communication between the data processing system and the counterpart processing system.

36. (New) The method of claim 25, wherein the at least one process resource manager (ERM) is also for managing an execution and compensation of compliant processes complying to the commit/backout protocol, wherein the initially consistent state of the system resources existed prior to the execution of the compliant processes, wherein changes to the system resources resulting from the execution of the compliant processes transform the system resources into a state of inconsistency, and wherein the method further comprises:

determining by the at least one process resource manager (ERM), upon receipt of a backout request resulting from the execution of the compliant processes, additional compensation actions to transform the system resources from the state of inconsistency to the initially consistent state; and

performing the additional compensation actions.